

It may be pertinent to the subject of this paper to remark on the general appearance of the region around Hankow. A vast alluvial plain extends to the horizon in all directions; whilst dotted over its surface are several shallow lakes, which are lost in the general flood of waters when the Yang-tse overflows its banks in the summer months. Rising abruptly out of this alluvial formation are a few isolated groups of low hills, which in the time of flood stand out like islands from the surrounding waste of waters.

It would be interesting to ascertain whether the banks of the Yang-tse possess this lamination whenever the river winds its way through an alluvial plain. I noticed the same appearance in the low banks of the estuary near the village of Wusung; the horizontal layers varying in this instance from one-tenth to one-fourteenth of an inch in thickness. Shells of both fresh-water and salt-water genera—"Paludina" and "Mactra"—were embedded in the bank.

H. B. GUPPY

An Experiment on Inherited Memory

WHEN I was a boy I had an electrical machine and Leyden jar; there was also a dog in the family. As a matter of course I "electrified" the dog, and ever afterwards during the remainder of his natural life he ran away in extreme terror when a bottle was presented to him.

The recollection of this has recently suggested an experiment that may be made by some of the readers of NATURE. By means of a small Leyden jar moderately charged startle both the father and the mother of an intended forthcoming generation of puppies. When these are full grown and away from their parents observe whether they are at all disturbed by the sight of a bottle or a Leyden jar, care being taken that the bottle is never shown to the parents in the presence of the offspring.

A single experiment will not be sufficient. It should be tried by several; for which reason I suggest it here. There is no more cruelty involved than in an ordinary practical joke. It is not the pain of the shock, but its startling mystery that frightens the animal, especially if the shock is given by placing the jar on a piece of tinfoil or sheet metal, and allowing the dog spontaneously to investigate by smelling the knob of the jar while his fore-feet are in communication with the outer coating. Under ordinary circumstances the dog obtains through his nose much information concerning the properties of things before he actually touches them, but in this case his whole life experience is contradicted by the mysterious, inodorous, diabolical vitality of the vitreous fiend. A bottle thenceforth makes upon the intellect of the dog a similar impression to that which a sheeted broomstick in a churchyard makes upon the similar intellect of a superstitious rustic.

W. MATTIEU WILLIAMS

Stonebridge Park, Willesden

Meteors

THREE very bright meteors were observed here during the month of December, 1880, and are, I think, worthy of record.

1. December 2, 1h. 14m. 50s. a.m. A meteor brighter than Jupiter descended towards the west point of the horizon, passing about 1° N. of Saturn, and somewhat farther from Jupiter, and in a line therefore nearly parallel to that joining those two planets. The train was visible about three seconds.

2. December 8, 10h. 55m. 30s. p.m. A meteor as bright as Jupiter descended towards the north point of the horizon, about 1° below η Ursæ Majoris, its path being inclined at an angle of about 35° to the horizon. The train was brilliant, but vanished speedily.

3. December 24, 10h. 4m. p.m. A very bright meteor, seen through (or below) the clouds in the south-south-east, shot down towards the south-south-west point of the horizon, at an angle of about 30°. No stars were visible in that part of the heavens at the time.

J. PARNELL

Upper Clapton, March 17

Classification of the Indo-Chinese and Oceanic Races

IN your issue of December 20 (p. 199), just to hand (February 12), I notice a contribution by Mr. A. H. Keane on the classification of the Indo-Chinese and Oceanic races.

As the *Orang Semang* of the Malay Peninsula is only just referred to, I conclude that the author has not seen Maclay's

papers on the wild tribes of the Malayan Peninsula in the second number of the *Journal* of the Straits Branch of the Royal Asiatic Society and a memoir by the same writer in the *Journal of Eastern Asia*, of which unfortunately only one number appeared. On the Jakuns, Maclay, who has probably seen more of their inner life and habits than any other ethnologist, writes as follows of the *Semang* and *Lakai* tribes:—"Logan" (*Journal of the Indian Archipelago*, vol. vii. p. 31, 32), "though differing from some others, says that the *Orang Semang* are certainly *Negritos*, but he calls them a mixed race. According to my experience I must declare this also to be incorrect.

"From my own experience and observations I have come to the conclusion that the *Orang Lakai* and the *Orang Semang* are tribes of the same stock, that further, in their physical *habitus* and in respect of language they are closely connected with each other, and represent a pure unmixed branch of the Melanesian race; anthropologically therefore they absolutely differ from the Malays. The Melanesian tribes of the Malay Peninsula, chiefly because of the form of their skull, which has a tendency to be brachycephalic, approach the *Negritos* of the Philippines, and, like the latter, they do not differ very widely from the Papuan tribes of New Guinea."

In the fifth number of the *Journal* of the Straits Branch of the R.A.S., Mr. Swettenham, the Assistant Colonial Secretary for the Native States S.S., thus describes the *Semangs* of Ijoh:—

"These people are short in stature, dark in colour, and their hair is close and woolly like that of negroes, with this difference, that all the men wear four or five short tufts or corkscrews of hair growing on the back of their heads, called *jamul*."

During my botanical excursion through Perak in 1877 I had two *Semangs* as guides, answering to Mr. Swettenham's description.

The Straits Branch of the R.A.S. is as yet in its infancy, having been established only in 1877, and its *Journal* has probably not yet secured a very wide circulation, although the five numbers that have been published contain probably more authentic information about the Malayan Peninsula than can be found elsewhere.

The characters Mr. Keane has employed to indicate the word "papiwah" are certainly not Malayan; at any rate it would be a matter of impossibility to secure the services of a Malay in Singapore who would be capable of deciphering them. The word, which is a corruption of the Malayan or Javanese adjective

puwah-puwah, is usually spelt thus—قفوة

Writing about New Guinea, Crawford ("A Descriptive Dictionary of the Indian Islands," p. 300) thus expresses himself about the word Papua:—"Some recent geographers have thought proper to give the great island the name of Papua, but an innovation which is correct neither in sound, sense nor orthography seems to possess no advantage over one which it has borne now for nearly three centuries and a half."

It may not be out of place here to remark that Messrs. Trübner and Co. are the London agents of the Straits R.A.S. Singapore S.S., February 12 H. J. MURTON

Fascination

IN the interior of the province Valdivia, South Chili, a species of wood-snipe (*Paipayan inc.*) is often caught by the natives in the following manner:—When the bird flies into one of the low bushes, which in spots of about three to six metres diameter are found frequently in the wood-meadows there, two men on horse-back go round it in the same direction, swinging their lazos over the bush. After ten or more rounds one man slips down from his horse, whilst the other continues, leading his companion's horse behind. Carefully then the first man creeps on to the point, where the paipayan is sitting nearly motionless or stupefied with the rider's circular movements, and kills it by a quick blow of a stick.

When I first was told so I would not believe it; but in 1853 or 1854 I took part myself in this kind of capture in the hacienda San Juan, in Valdivia, belonging to my chief, Dr. Philippi, now professor in the University and director of the museum in Santiago. I had left the house without gun, accompanied by a native servant, when, in a part of the wood called Quemas, I observed a paipayan falling into a dense but low bush of the

above-mentioned kind. Desiring to obtain a good specimen of this not very common bird for our collection, I expressed my regret at not having the gun, but the servant replied: "Never mind, if you wish, we will get the bird." And he caught it with my assistance in the above way without injuring it.

Marburg, March 16

CARL OCHSENIUS

Flying-Fish

JUNE 11, 1873, at sea 300 miles south of Panama, I saw a man-of-war hawk and a school of bonitos in pursuit of a school of flying-fish. As one of the latter came out of the water, closely pursued by his enemy, the hawk swooped down, not fifty yards from the ship, but missed his prey, the fish apparently turning from its course to avoid him. A second attempt was more successful, and the hawk flew off with the flying-fish in his talons. The whole affair was plainly seen, as also was the continued chase of the flying-fish by the bonitos.

ALLAN D. BROWN,
Commander U.S. Navy

U.S. Torpedo Station, Newport, R.I., U.S.A., March 10

THE OXFORD COMMISSIONERS ON PROFESSORS

WE are not disposed to agree with the outcry which has been raised in some quarters in reference to the proposition of the Oxford University Commissioners to enact certain regulations with the view of compelling Oxford Professors to reside in the University and to give lectures.

Some of the Commissioners' regulations relating to this subject appear to many to be ill-advised, but they have been improved by the recent modifications, and the general intention seems not only a right one, but also one which must be carried out whenever public opinion is brought to bear on the matter.

A very simple view of the matter may be suggested. The professors in the English Universities might be put on the same footing as are the professors in German Universities. In those Universities the professors carry on abundant research; they also give very numerous lectures, usually what may be called "representative courses," that is, courses in which an attempt is made to present to the student the main outlines and much of the detail of the subject professed. Even in the Collège de France at Paris, which is *not* (strictly speaking) an educational institution, each professor is required to give an annual course of lectures (to the number of forty, we believe).

Research and the advancement of learning are, we do not for a moment doubt, the highest, and therefore in a certain sense the first business of University professors. It is perhaps because this is so generally admitted that the Commissioners did not at first insist upon it. But it is in order that he may teach—not huge popular audiences nor cram classes, but devoted thoroughgoing students—that the professor creates new knowledge. His best result is not new knowledge itself, but new youthful investigators ready and able to carry on the researches which he has commenced, and through which they have learnt method and gained enthusiasm. There is no stimulus to research so healthy and so sure as that afforded by the opportunity of converting a class of generous-minded young men into ardent disciples and loving fellow-workers.

Hence, it may be maintained, there is no necessary antagonism between *true professorial teaching* (i.e. definite courses of lectures) and the profoundest study and research.

That the Commissioners have introduced no binding regulations with the object of forcing a professor to carry on research, is, we believe, a proof of wisdom and a just tribute to the dignity of such work. No regulations can make an investigator: the question as to whether a given professorship will be used for the advancement of

science and learning is decided before any regulations can have effect, viz., when the choice of a person to fill the post is made. If he is a "searcher" already, he will remain so; if he is not, a bad choice will have been made, and no regulations as to research can ever amend it. It is, however, well that the Commissioners have seen fit to improve their first set of regulations in so far as to state that an Oxford professor is *expected* to advance the study of the subject to which his chair is assigned.

The measures which the Commissioners propose for insuring the delivery of lectures by Oxford professors are objectionable on the ground that they are purely penal. They should be persuasive. The German professor is only too glad to give a thorough and attractive course of lectures if he has it in him to do so, because he thereby doubles or trebles the income which he derives from endowment. The Oxford Commissioners have made a great mistake in prohibiting the professors from charging fees for the compulsory course of two or three lectures a week. All students, whether belonging to the professor's own college or not, should be liable to pay fees to the professors for attendance on their courses of instruction, whether lectures or laboratorial. It is only by so arranging the position and endowment of a professor that he is both able and willing to increase his income by the fees paid by his class, that a really firm and satisfactory basis for the regulation of a professor's duties can be obtained.

It has been maintained that where an income derived from an endowment of 600*l.* can be increased to 1000*l.* a year by the receipts from lecture-fees, the professor will be anxious to give such lectures as will attract students—and in spite of objections ready to hand, it is held that those are the lectures which should be given. It is not true that a professor so circumstanced will necessarily degenerate into a mere examination coach. If he should be tempted to do so the fault lies with the examination. The professor should himself have a voice in the arrangement of the examination, and care should be taken by the University that it is so organised and defined in all its parts that students who have carefully followed a high class of professorial teaching, such as would be offered by a Huxley, a Ludwig, a Bunsen, or a Fischer, should come to the front in it rather than those who have crammed with some newly-fledged classman, or with an experienced "coach" versed in all the artifices of sham knowledge.

It appears to be an excellent and necessary provision to which it is to be hoped that the Commissioners will adhere in spite of all opposition, that the professors in each faculty should with other University teachers in the same faculty constitute a council having the power of controlling to some extent the lectures of each individual professor. There is no degradation in this; it is the almost universal custom in existing Universities. The faculty has to provide for the teaching of its proper studies, and naturally must exercise a friendly control over the extent and scope of the courses of instruction offered by its members.

It is owing to the absence of any such control at the present moment that even by those Oxford professors who do lecture, no representative course on *any subject* is ever given. A student in Oxford cannot by any possibility attend a thorough *course* of lectures or laboratory instruction in physiology, nor in zoology, nor in botany, nor in physics, nor in chemistry. And yet in the smallest as well as the largest of the often despised "medical schools" of London, a student has provided for him courses of from thirty to a hundred lectures every year in all these subjects, as well as in others, to be attended, of course, in successive sessions. The same absence of complete or representative courses of instruction is to be noted at Oxford in other departments, such as philology, archæology, various departments of history, &c.